## **EMPLOYEE TRAINING RECORD**

TRAINING TITLE

Clarifiers - Hazardous Gases

## **KEY TEACHING POINTS**

## **GASES**

Hydrogen Sulfide (H<sub>2</sub>S)

Causes a "rotten egg" odor. This strong odor, noticeable at low concentrations, is a poor warning sign because it may quickly dull your sense of smell and some people are physically unable to smell it. H<sub>2</sub>S readily combines with oxygen to form sulfuric acid which will dissolve concrete. If you breathe too much H<sub>2</sub>S, respiratory irritation effects may occur. These effects occur due to the formation of alkali sulfide when the gas comes in contact with moist tissue. Remember, H<sub>2</sub>S in gaseous form is extremely toxic and can be flammable and explosive when mixed with the proper amount of air (oxygen).

- Chlorine (Cl<sub>2</sub>)
  - Very irritating to the eyes, skin, and mucous membranes. Causes death by suffocation and formation of acid in the lungs. Cl<sub>2</sub> acts as an asphyxiate by causing cramps int the muscles of the larynx (choking), swelling of the mucous membranes and suspension of respiration. Cl<sub>2</sub> is extremely dangerous. The proper type of breathing equipment (self contained) should be readily available when working with chlorine.
- Carbon Dioxide (CO<sub>2</sub>)
  - Odorless and tasteless, CO<sub>2</sub> can cause asphyxiation by displacing oxygen in a poorly ventilated area. Concentrations of 10% can produce unconsciousness and death from oxygen deficiency.
- Carbon Monoxide (CO)
  - Colorless, odorless, non-irritating, flammable, explosive. Interferes with the blood's ability to carry oxygen to the brain. May cause asphyxiation.
- Gasoline and other petroleum products.
  - May cause fires or explosions or displace oxygen and asphyxiate you.
- Methane (CH<sub>4</sub>)

Explosive, odorless and may cause asphyxiation.

## **TEST**

QUESTION		ANSWERS	
		TRUE	FALSE
Carbon Dioxide is odorless and tasteless and can cause asphyxiation.			
2. Carbon Monoxide is flammable.			
3. Hydrogen Sulfide is easy to detect because you can always smell it.			
4. Hydrogen Sulfide can be flammable and explosive.			
5. There is nothing explosive or flammable around clarifiers because they are just water.			
EMPLOYEE'S NAME	EMPLOYEE'S SIGNATURE	DATE	
INSTRUCTOR'S NAME	INSTRUCTOR'S SIGNATURE	DATE	